

What is claimed is:

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1. A manufacturing method of a complex lens for a tandem scanning optical system that consists of a plurality of stacked lens portions and said lens portions converging a plurality of light beams, which are modulated independently and deflected by a deflector, onto a surface to be scanned, respectively, for forming a plurality of scanning lines at the same time, said method comprising:

preparing molding dies for forming a cavity to form said complex lens as a single-piece element; and

injecting lens material into said cavity,

wherein said molding dies include a pair of single-piece mirror surface cores that form a plurality of lens surfaces of said complex lens at an incident side and a plurality of lens surfaces at an exit side, respectively.

2. The manufacturing method according to claim 1, wherein each of mirror surface portions of said mirror surface cores has a concave sectional shape in a direction perpendicular to the direction in which a plurality of light beams scan.

3. The manufacturing method according to claim 1, wherein said mirror surface portions of at least one of said mirror surface cores at the incident and exit sides are formed as

rotationally-symmetrical concave surfaces with respect to respective optical axes.

4. A complex lens for a tandem scanning optical system that converges a plurality of light beams, which are modulated independently and deflected by a deflector, onto a surface to be scanned, for forming a plurality of scanning lines at the same time, said complex lens comprising:

a plurality of stacked lens portions that are molded as a single-piece element,

wherein a plurality of lens surfaces of said lens portions at an incident side are formed by a single-piece mirror surface core and a plurality of lens surfaces of said lens portions at an exit side are formed by another single-piece mirror surface core during molding process.

5. The complex lens according to claim 4, wherein each of said lens surfaces of said lens portions has a convex sectional shape in a direction perpendicular to the direction in which a plurality of light beams scan.

6. The complex lens according to claim 4, wherein said lens surfaces of at least one of the incident and exit sides are formed as rotationally-symmetrical convex surfaces with respect to respective optical axes.